CLAIMS:

1. A process for producing a fluorine-containing synthetic quartz glass article, comprising the steps of feeding a silica-forming reactant gas, hydrogen gas, oxygen gas, and optionally, a fluorine compound gas from a burner to a reaction zone, flame hydrolyzing the silica-forming reactant gas in the reaction zone to form fine particles of silica, depositing the silica particles on a rotatable substrate in the reaction zone to form a porous silica matrix, heating and vitrifying the porous silica matrix in a fluorine compound gas-containing atmosphere to form a synthetic quartz glass ingot, and heating and molding the ingot into a synthetic quartz glass article, characterized in that a surface portion of the synthetic quartz glass ingot is removed prior to the heating and molding step.

2. The process of claim 1 wherein the ingot has a diameter defining an outer periphery and a length between longitudinal opposite ends, and the surface portion of the synthetic quartz glass ingot which is removed is up to 50% of the diameter of the ingot at the outer periphery and up to 50% of the length, in total, at the opposite ends.

3. A synthetic quartz glass article obtained by the process of claim 1.

4. The synthetic quartz glass article of claim 3, having a birefringence of up to 10 nm/cm.

5. The synthetic quartz glass article of claim 3, having a refractive index distribution of up to 5×10^{-4}.

6. The synthetic quartz glass article of claim 3, having a minimum transmittance of at least 80.0% to light having a wavelength of 157.6 nm.

7. The synthetic quartz glass article of claim 3, having a transmittance distribution of up to 1.0% to light having a wavelength of 157.6 nm.

8. The synthetic quartz glass article of claim 3, having a minimum transmittance of at least 90.0% to light having a wavelength of 193.4 nm.

9. The synthetic quartz glass article of claim 3, having a transmittance distribution of up to 1.0% to light having a wavelength of 193.4 nm.